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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/921,867

08/03/2001

Brian Samuel Beaman

YOR919930028US6

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7590

04/13/2006

Dr. Daniel P. Morris, Esq.
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EXAMINER

TUGBANG, ANTHONY D

ART UNIT

PAPER NUMBER

3729

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/921,867	BEAMAN ET AL.	
	Examiner	Art Unit	
	A. Dexter Tugbang	3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-393 is/are pending in the application.
- 4a) Of the above claim(s) 53-393 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 53-393 continue to stand as being withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on February 2, 2005.

Response to Amendment

2. The applicant(s) amendment filed on December 7, 2005 has been fully considered and made of record.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Priority

4. If applicant desires benefit of previously filed application(s) (i.e. 08/754,869 and 08/055,485) under 35 U.S.C. 120, specific reference to the earlier filed application must be made in the instant application. For benefit claims under 35 U.S.C. 120, 121 or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications. This should appear as the first sentence(s) of the specification following the title, preferably as a separate paragraph unless it appears in an application data sheet. The status of nonprovisional parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. ____" should

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follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c).

A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a

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question whether the delay was unintentional. The petition should be addressed to: Mail Stop
Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Claim Rejections - 35 USC § 102

5. Claims 29-43, 45 and 52 are rejected under 35 U.S.C. 102(e) as being anticipated by Eldridge et al 6,336,269.

Eldridge discloses a method (see Figs. 11A-12C) comprising: forming a contact tip structure 1130 on a sacrificial substrate 1104; prior to constructing the contact structure, providing a texture (contact 1120) formed in and with an area of the sacrificial substrate; attaching an electrical interconnection element 1250 to the contact tip structure to form a first structure having the electrical interconnection element and the contact tip structure; and removing the contact tip structure from the sacrificial substrate wherein the first structure is compliant after the removing of the contact tip structure (see sequence of Figs. 11E - 11F), which meets all of the limitations of the claimed manufacturing method.

Regarding Claim(s) 30-32, Eldridge further teaches that the texture is formed by embossing (with embossing tool 1110), which forms a pit in the sacrificial substrate 1104 and a raised contact surface from the sacrificial substrate (shown in Fig. 11C).

Regarding Claim(s) 33-36, Eldridge further teaches that the contact tip structure comprises a surface layer 1132 and a surface material 1124 of Ni (see col. 70, lines 8-10).

Regarding Claim(s) 37-42, Eldridge further teaches that the contact tip comprises a U-shaped protuberance (shown in Fig. 11D) and gold with a bonding material of nickel (see col. 70, lines 10+).

Regarding Claim(s) 43, Eldridge further teaches that the contact tip structure has an enlarged circular end at the top of the structure (see Fig. 11D).

Regarding Claim(s) 52, Eldridge further teaches that the attaching is selected from solder bonding (solder 1282).

Claim Rejections - 35 USC § 103

6. Claims 44 and 46-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eldridge et al in view of Japanese Patent Publication JP 60-107845, referred to hereinafter as JP'845.

Regarding Claim(s) 44, Eldridge further teaches that the interconnection element has an elongated electrical conductor (terminals, not labeled, on the bottom surface of 1252, in Fig. 12A).

Regarding Claim(s) 46 and 47, the claimed "compliant core element" is alternatively read as the terminals, not labeled, on the bottom surface of 1252.

Eldridge does not teach that the elongated electrical conductor material, or compliant core element includes an additional "surface layer" (as required by Claim 44), or just a "layer" (as required by Claims 46 and 47).

JP'845 shows that elongated electrical conductors, or compliant core elements 3 (in Fig. 1) can be made of more than one layer.

Further regarding Claims 44 and 47-51, JP'845 teaches that the additional layers can be formed of both Au (gold) and Ni (nickel) to stabilize the bonding strength when bonding the core element with the contact tip structure (see PURPOSE and CONSTITUTION).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of Eldridge by forming the “surface layer”, or “layer” with both gold and nickel materials to positively stabilize the bonding strength when bonding the core element with the contact tip structure.

Response to Arguments

7. The applicant(s) arguments filed on December 7, 2005 have been fully considered but they are not persuasive. The applicant(s) have not been awarded the benefit of the earlier filing date as there was no preliminary amendment that was filed that cross-referenced the earlier filed applications. The preliminary amendment filed on April 2, 2002 did not amend the specification to include a cross-reference to the earlier filed application. While the applicant(s) noted on page 7 of the response filed on April 2, 2002, that the instant application was a continuation of several earlier filed applications, this was merely a statement in the remarks and was not an amendment to the specification. In order for the applicant(s) to receive the benefit of the previously filed application(s) (i.e. 08/754,869 and 08/055,485), the applicant(s) must file a petition pursuant to 37 CFR § 1.78 (a)(3) and as emphasized in paragraph 4 above. Until the petition has been granted, the rejections above will be maintained.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, consisting of several stylized, overlapping loops and a long, sweeping tail that extends to the right.

A. Dexter Tugbang
Primary Examiner
Art Unit 3729

April 10, 2006